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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/609,167

06/27/2003

John B. Hageman

DP-308578 7500/244

7809

7590

05/09/2005

Scott A McBain
Delphi Technologies Inc
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Troy, MI 48007

EXAMINER

SCHWARTZ, CHRISTOPHER P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3683

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,167

Applicant(s)

HAGEMAN ET AL.

Examiner

Christopher P. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

03 May 2005

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,8-10 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,8-10,13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

1. The amendment filed April 6, 2005 has been received and considered. The action below is a supplemental action to the one mailed February 23, 2005 since applicant's amendment is a supplemental response to the Notice of Non-Compliant amendment mailed 3/4/05. Since the claimed limitations have not been changed the action of February 23, 2005 has been repeated below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1,6,8,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deane et al. in view of Kapaan et al.

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Regarding claims 1,10 subject to the 112 above and as best understood, Deane et al. discloses a brake assembly comprising a rotor (inherent in the reference) a brake caliper 10 including a hydraulic “actuator motor”, at least one friction pad and at least one “heat pipe” 16 functioning as claimed which extends into coolant lines 52,53—or other “heat pipes”, as broadly claimed. Note also coolant line or “heat pipe” 23.

Deane et al. lacks using an electric “actuator”.

It is notoriously well known in the art that such “actuators” may in fact be hydraulic, electric or pneumatic and are interchangeable. Kapaan et al. (see claims 22-24) is relied upon to provide this general teaching.

The ordinary skilled worker in the art at the time of the invention would have found it obvious to have substituted an electric actuator (having a “stator”) for the hydraulic actuator of Deane et al. dependent upon the actuation and control characteristics desired from the motor. For instance it is often easier to adjust for wear of the brake pads with electric motors. Another advantage may be savings on space and weight. Any of the heat pipes of Deane et al. discussed above are inherently “connected to” the stator (i.e. housing, coil, yoke etc.) of the actuator in Deane et al., as modified above.

Regarding claim 6 simply to have attached the thermal conduit of Deane et al. to a “suspension component” would have been obvious to the ordinary skilled worker in the art at the time the invention was made to keep it clear from possible damage or simply as a necessary attachment point. Another take on the limitation of this claim is

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that since the calipers are attached to the wheels which are in turn attached to the suspension components of the vehicle, then so is/are the heat pipe(s) discussed above.

Regarding claim 8 see the top of column 3 line 2.

5. Claims 9,13 rejected under 35 U.S.C. 103(a) as being unpatentable over Deane et al., in view of Kapaan et al., as applied to claims 1,10 above, and further in view of Bryant.

Regarding claims 9,13 Deane et al. uses a radiator as the heatsink member. Radiators have "fins" or vanes. Note also the fan in figure 1.

Bryant is simply relied upon to provide a clearer picture at 206,210 (see top of col. 9) of what is presumably taught or shown in Deane et al.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

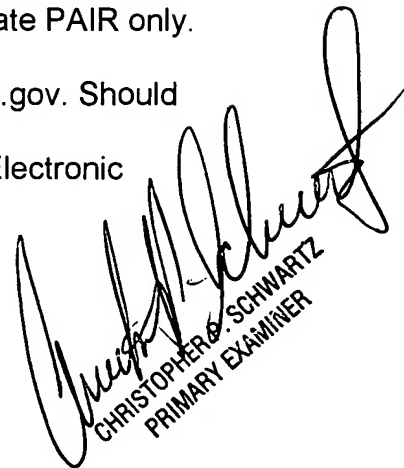
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps

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5/3/05


CHRISTOPHER SCHWARTZ
PRIMARY EXAMINER